

Inflation, deflation and disinflation definitions .

Inflation is a sustained increase in the general price level, meaning the average prices of goods and services rise over time. For example the UK's inflation rate in October 2022: **11.1%** (41-year high).

Deflation is a fall in the general price level, meaning the inflation rate is below 0%. For example Prices fell by **14%** in 1922 , more recently in 2015 we briefly hit **-0.1%** (first negative rate in 50 years).

Disinflation is when the price level is still rising, but the rate of inflation is falling over time . For example from October 2022 to May 2024: Rate slowed from **11.1%** down to **2.0%**. (Prices were still rising, but at a significantly slower pace)

Measuring inflation

The Consumer Price Index

CPI measures inflation using a basket of goods and services that represents typical household spending. Items in the basket are weighted, so goods that take up a bigger share of spending have a bigger impact on the final inflation figure.

Each month, prices are collected and compared with a previous period, often the same month a year earlier. These price changes are then combined using the weights to produce an overall measure of inflation.

The basket is large (around **700** goods and services), updated annually to reflect changing consumer habits, and prices are collected across many locations.

Calculating inflation using an index

Inflation is calculated as the percentage change in the price level, often measured using the CPI index. For example, if CPI rises from 100 to 107, the inflation rate is 7%.

A common index method is:

- $\text{CPI} = (\text{cost of basket in year X} / \text{cost of basket in base year}) \times 100$
- $\text{Inflation rate} = (\text{new CPI} - \text{old CPI}) / \text{old CPI} \times 100$

Why CPI is useful

CPI tracks changes in the price level over time, helping policymakers make decisions such as setting interest rates or planning government budgets.

It is also useful for firms when deciding pricing strategies and judging how strong demand is likely to be.

Limitations of CPI

CPI gives one average inflation rate, but different households experience different inflation depending on **what** they buy. If essentials like food and energy rise fastest, lower-income households may face a higher personal inflation rate.

CPI can struggle to reflect quality changes, where products improve over time, and substitution effects, where people switch away from goods that become more expensive. It can also ignore regional differences and may be affected by data-collection and sampling issues because it relies on survey based methods.

CPI vs RPI

The UK also uses the Retail Prices Index (RPI), which is calculated in a similar way but includes extra housing-related costs such as mortgage interest payments.

This often makes RPI higher than CPI, and the gap matters when comparing inflation across different measures or across countries.

Causes of inflation

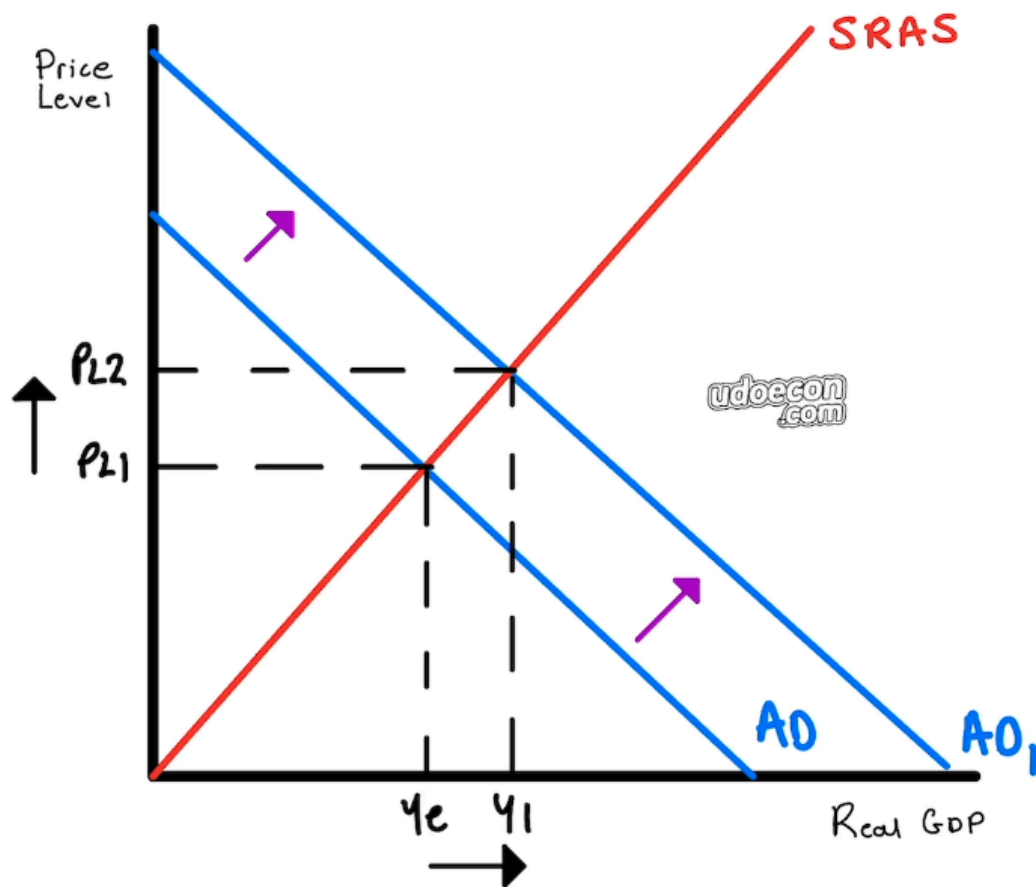
Demand-pull inflation

Demand-pull inflation occurs when **aggregate demand increases**, shown by a **rightward shift from AD to AD1** on an AD–AS diagram.

At the original equilibrium price level **PL1**, this increase in demand creates **excess demand**, as AD1 exceeds SRAS.

As a result, firms respond by raising prices and expanding output in the short run. The economy moves **up along the SRAS curve** to a new equilibrium, causing the **price level to rise from PL1 to PL2** and **real GDP to increase from Y_e to Y1**.

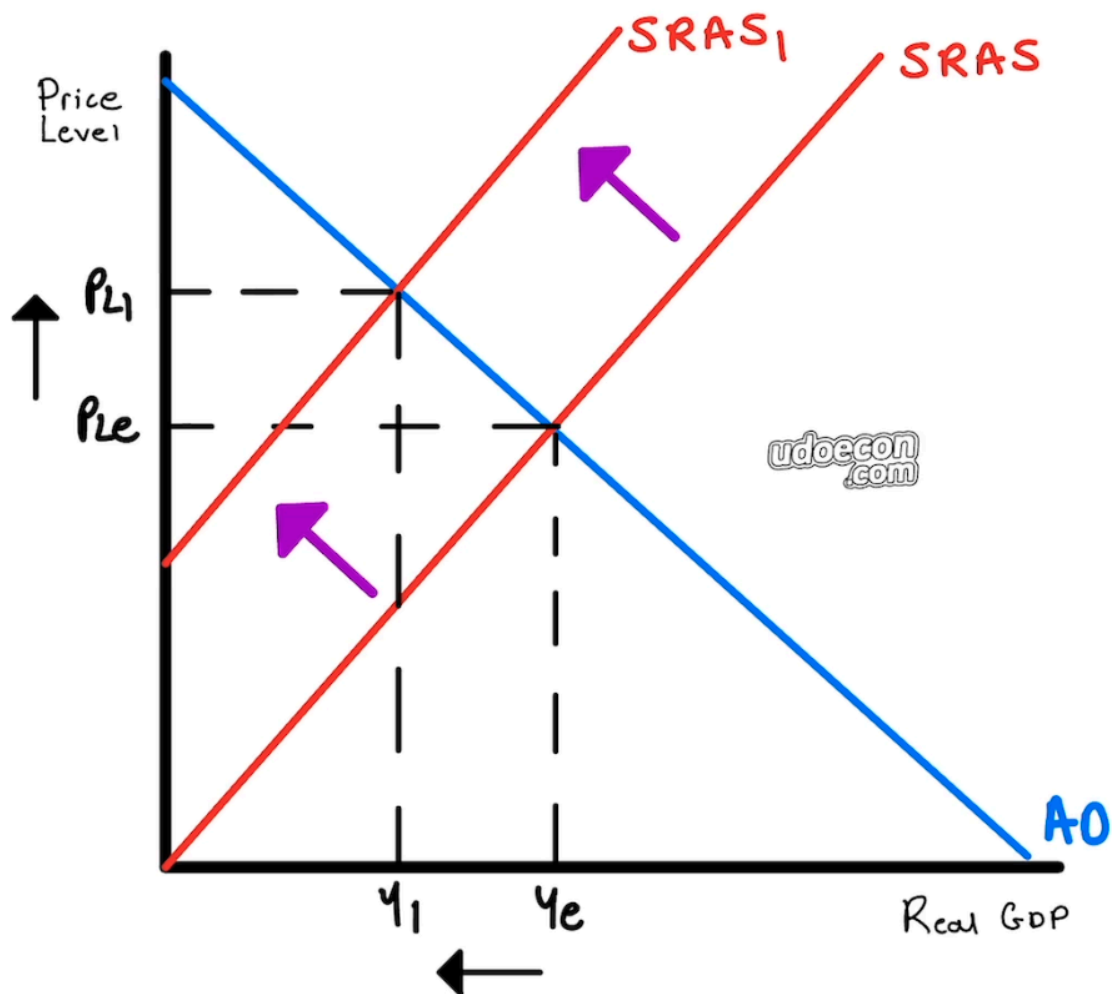
For example, **Post Pandemic Reopening 2021-22**. The release of **£140 billion** in "forced" pandemic savings fueled a surge in consumer spending that shifted **Aggregate Demand (AD) to the right**, causing the UK inflation rate to jump from **2.1%** in May 2021 to **7.0%** by March 2022.



Cost-push inflation

Cost-push inflation happens when short-run aggregate supply falls, shifting SRAS to the left from SRAS to SRAS1 because production costs rise. Firms face higher costs and raise prices to protect profit margins, increasing the price level from P_{Le} to P_{L1} .

For example, Following the invasion of Ukraine, the UK saw **wholesale gas prices quadruple** in a single year, triggering a record **54% rise in the energy price cap** in April 2022 that increased business production costs and shifted **Short-Run Aggregate Supply (SRAS) to the left**, driving CPI inflation to a 41-year high of **11.1%**.



Growth of the money supply

This can be explained using the quantity equation $MV = PY$, where money supply (M) times velocity (V) equals the price level (P) times real output (Y). If velocity and real output are assumed fixed in the long run, an increase in the money supply means more money chasing the same output, so the price level rises.

① $MV = PQ$

② $M\cancel{V} = P\cancel{Q}$

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③ $M = P \rightarrow \text{Money Supply} = \text{Price Level}^{(\text{Inflation})}$

④ Therefore $\rightarrow \uparrow M = \uparrow P$ and $\downarrow M = \downarrow P$

Consequences of inflation

Effects on households

- **Inflation reduces real incomes** when it rises faster than wages, cutting **purchasing power** and potentially reducing **consumption and aggregate demand**. For example, during the UK **cost-of-living crisis**, inflation peaked at **over 11% in 2022**, while wage growth lagged behind, causing a fall in **real household incomes**.
- Hits people on **fixed incomes** hardest. For example, many UK **pensioners and benefit recipients** faced rising food and energy costs (food price inflation peaked at around 20% during 2023) before **benefits and pensions were fully uprated** in line with inflation.
- **Inflation can redistribute income between savers and borrowers**. **Savers lose** because the **real value of savings falls**, while **borrowers can gain** because the **real value of debt falls** (depends on interest rates).

Effects on firms

- During **cost-push inflation**, firms face **higher costs** and may be unable to **pass these fully onto consumers**, squeezing **profit margins**. For example, **Mitchells & Butlers** reported **£130 million in extra costs** in 2022, with food input costs (e.g. beef) rising by **around 27%**, limiting profit margins despite price rises.
- Inflation can reduce **export competitiveness** if **domestic prices rise faster than competitors**, lowering **export demand and aggregate demand**.

- Firms face **menu costs**, such as the cost of **frequent price changes** (admin costs). During the recent high-inflation period, around **60% of firms adjusted prices reactively**.
- **Inflation increases uncertainty**, making **future costs and revenues harder to predict** and potentially **delaying investment**. For example, **65% of UK manufacturers** reported postponing or reconsidering investment due to cost volatility and inflation uncertainty.

Effects on workers

- **Leads Falling real wages** . Workers may experience **falling real wages** if **nominal wage growth does not keep up with inflation**. For example, in **April 2023**, UK **nominal earnings rose by around 6.2%**, but **real wages fell by about 1.5%**, as inflation remained very high, leaving workers worse off in real terms.
- **Lead to a Money illusion** .Some workers may experience **money illusion**, focusing on **higher nominal pay** rather than what it can actually buy. For example, pay rises of **5–6% in 2023** appeared generous, but many workers still faced a **fall in real purchasing power** due to double-digit inflation..
- **The phenomenon of fiscal drag** . Inflation can cause **fiscal drag** if **tax thresholds are not adjusted**, pulling workers into **higher tax bands** as **nominal wages rise**. For example, The OBR estimates that fiscal drag as a **stealth tax** will raise nearly **£30 billion** a year for the UK government by 2027–28.
- **Impact on unemployment:**
The effect on unemployment depends on the **cause** of inflation. Cost-push inflation, higher costs can squeeze profits and reduce output, leading firms to **cut** jobs or freeze hiring, which can raise unemployment. For example, UK unemployment rose to around 5.1% (≈1.8 million people) as firms **reduced** hiring in response to higher energy, wage, and input **costs**, with companies such as **Sainsbury's** cutting around **1,500** jobs as part of cost-saving measures.
- By contrast, under demand-pull inflation, stronger demand can boost **growth** and increase derived demand for labour, which can reduce unemployment. For example, during the post-COVID recovery in 2021–22, strong demand in sectors such as **hospitality and logistics** supported hiring and kept unemployment relatively low.

Effects on government

- If the government is a **borrower** (UK govt is a **big** borrower), **inflation reduces the real value of debt**, making it easier to repay in **real terms**. For example, when UK inflation exceeded **10% in 2022**, the **real value of existing nominal government**

debt fell, reducing its real burden.

- However, if **interest rates rise to control inflation**, **government debt interest costs increase**, especially because some debt is **index-linked**. For example, UK **debt interest spending exceeded £120 billion in 2022–23**, largely due to **index-linked gilts**, which account for **around 25% of UK government debt**.
- Inflation raises **public sector costs**, increasing **spending pressures**. For example, higher inflation increased costs of **NHS pay**, **school energy bills**, and **local authority services** during the cost-of-living crisis.
- Inflation can increase **tax revenue** as **nominal wages and profits rise**, with **fiscal drag** boosting revenues further. For example, frozen income tax thresholds are expected to raise **over £30 billion per year by 2027–28**, as more workers are pushed into higher tax bands.